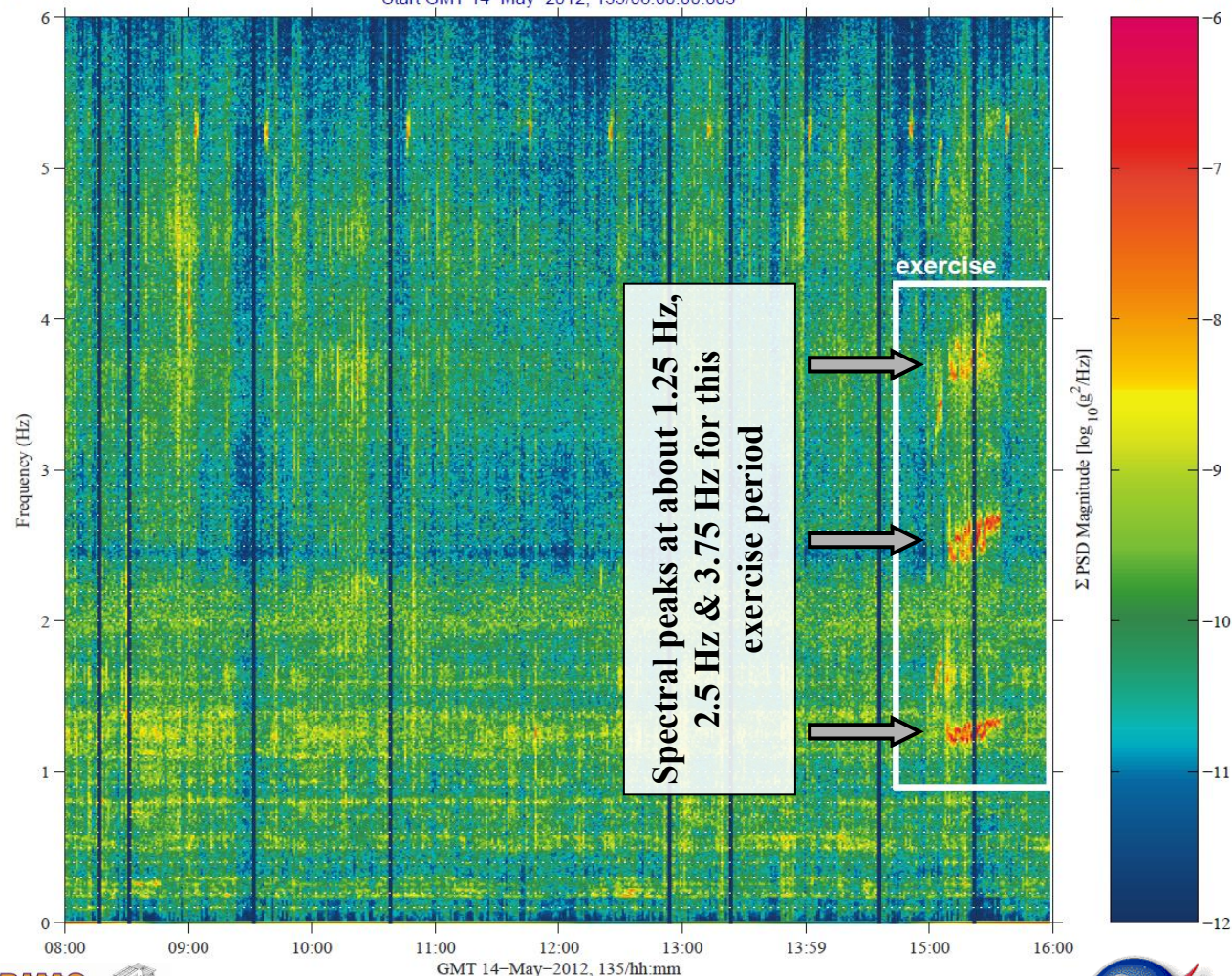


## Exercise Qualify

sams2, 121f03006 at LAB1O1, ER2, Lower Z Panel[191.54 -40.54 135.25]  
142.0000 sa/sec (6.00 Hz)  
 $\Delta f = 0.009$  Hz, Nfft = 16384  
Temp. Res. = 57.690 sec, No = 8192

sams2, 121f03006

Start GMT 14-May-2012, 135/08:00:00.003



Acceleration Measurements Program



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### Description

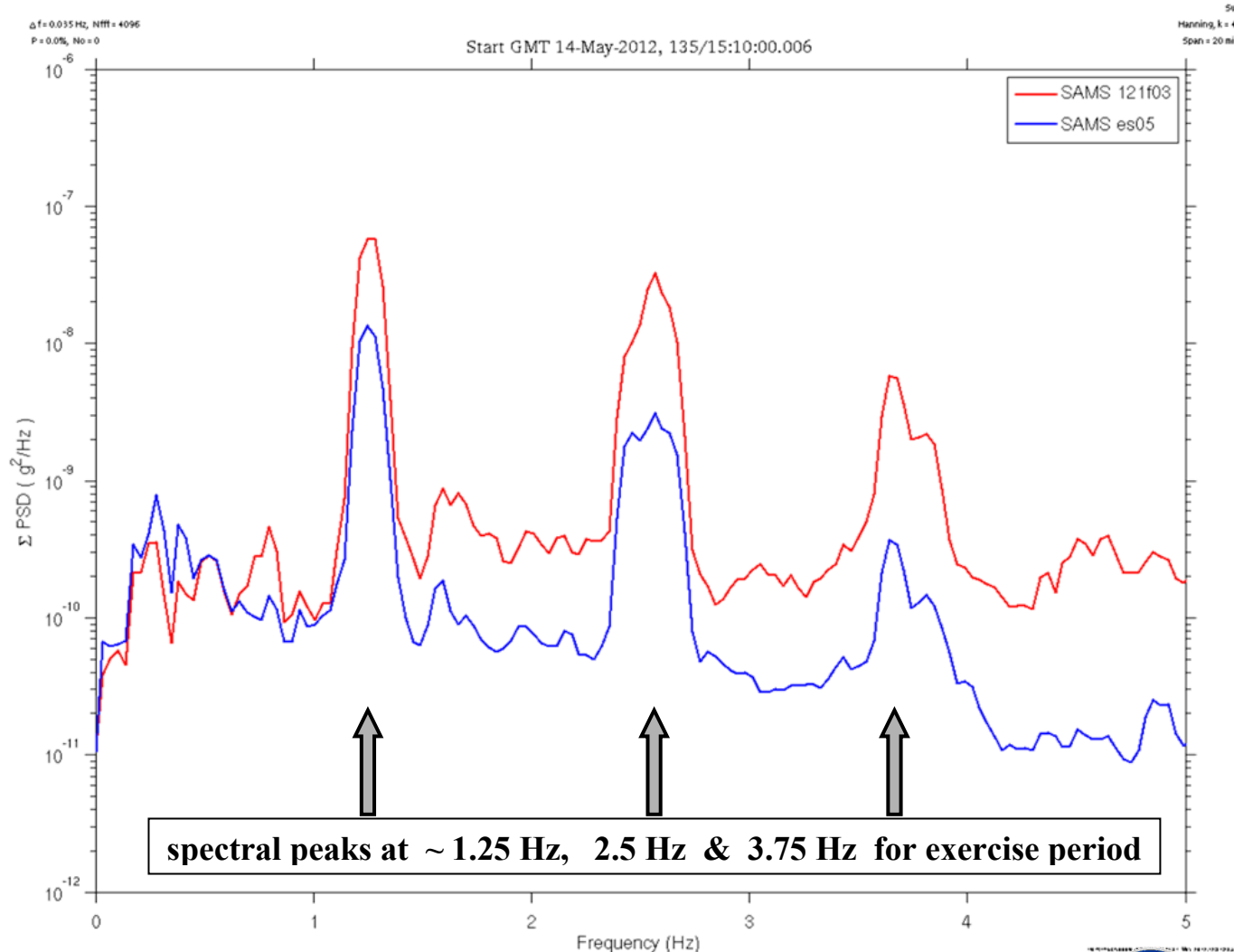
Sensor	121f03 142 sa/sec (6 Hz)
Location	LAB1O1, ER2, Lower Z Panel
Plot Type	spectrogram

### Notes:

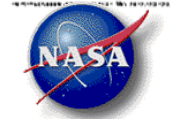
- The objective of this handbook entry is to compare a crew exercise period as measured by two different SAMS sensors in the US LAB.
- To qualify this event, we first show on this page a spectrogram computed from SAMS sensor 121f03 located on the lower Z panel of ER2.
- Note the excitation at about 1.25 Hz, 2.5 Hz, and 3.75 Hz as seen by the red horizontal streaks and marked with rightward gray arrows at those frequencies.
- The data show that this exercise period started at GMT 14-May-2012, 135/15:03 and lasted just over 30 minutes.

Regime:	Vibratory
Category:	Crew
Source:	Exercise

## Exercise Quantify



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### Description

Sensor Locations	<b>121f03 at ER2</b> <b>ES05 at CIR (w/PaRIS)</b>
Plot Type	Power Spectral Density

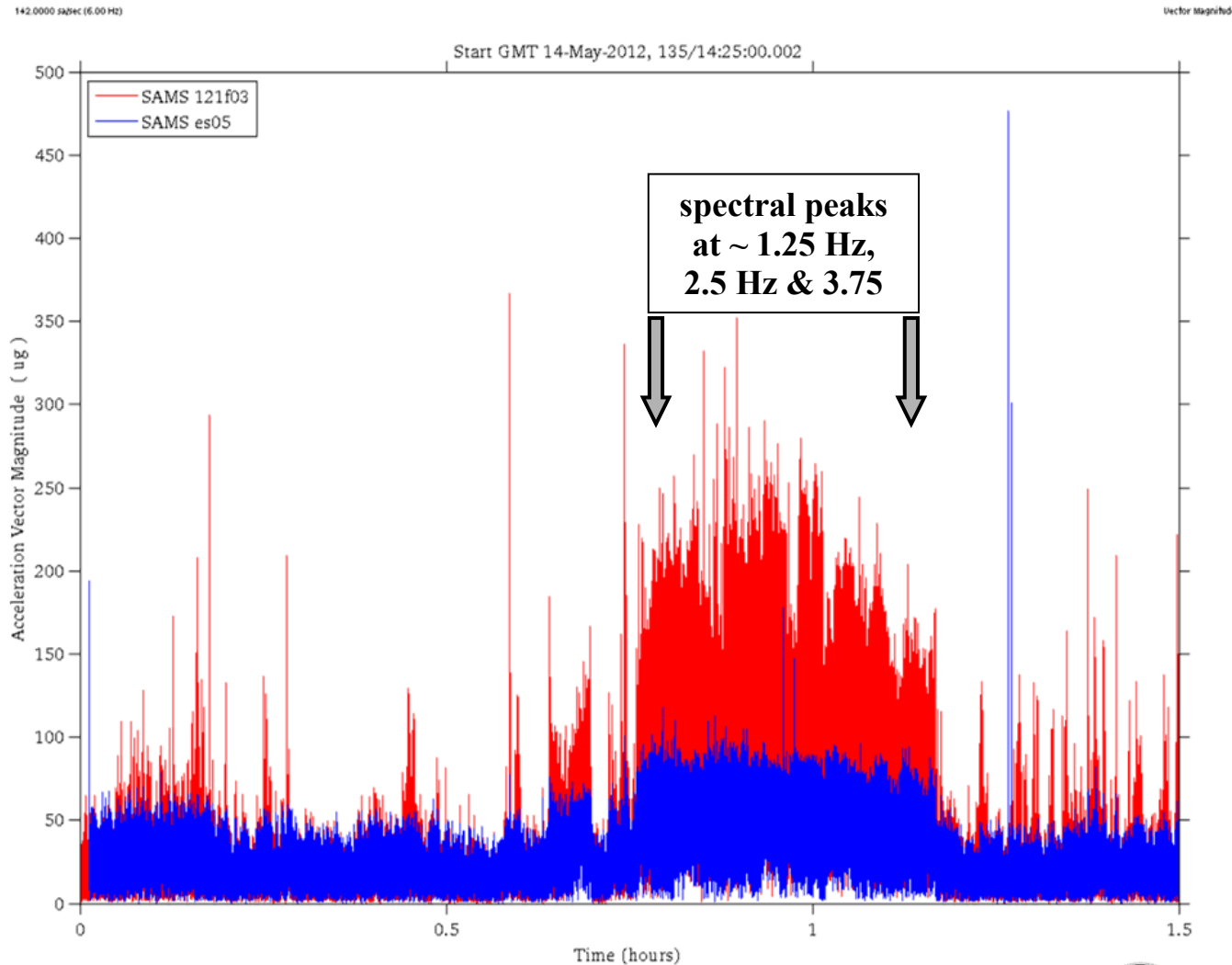
### Notes:

- From this comparison of PSDs, note the spectral roll-off associated with the **SAMS es05** data measured at the **the Combustion Integrated Rack (CIR)** location relative to the **SAMS 121f03** data taken at the **ER2** location during 20 minutes within this exercise period. This dampening is associated with the PaRIS (Passive Rack Isolation System) of the CIR.
- The following table breaks down the RMS level of acceleration in 1 Hz bands for this 20-minute span:

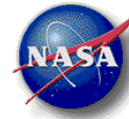
frequency range (Hz)	ugRMS	
	<b>NON-ISOLATED RACK</b>	<b>ISOLATED RACK</b>
	<b>SAMS 121f03</b>	<b>SAMS es05</b>
[ 0.01 1 )	13	13
[ 1 2 )	85	41
[ 2 3 )	69	26
[ 3 4 )	34	10
[ 4 5 )	15	4

Regime:	Vibratory
Category:	Crew
Source:	Exercise

## Exercise Quantify



Acceleration Measurements Program



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### Description

Sensor Locations	<b>121f03 at ER2</b> <b>ES05 at CIR (w/PaRIS)</b>
Plot Type	Vector Magnitude vs. Time

### Notes:

- From this comparison of acceleration vector magnitude versus time data, note particularly during the span between the downward-pointing gray arrows that the **SAMS es05 data measured at the Combustion Integrated Rack (CIR) location** is markedly attenuated relative to the **SAMS 121f03 data taken at the ER2 location**. This further emphasizes the dampening afforded by the PaRIS (Passive Rack Isolation System) of the CIR.
- The acceleration vector magnitude for SAMS data low-pass filtered at 6 Hz **averaged 105 ug for the ER2 location**, while the **average was 47 ug for the CIR location**.

Regime:	Vibratory
Category:	Crew
Source:	Exercise